

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:	John Humphries Parkes	)	Examiner: Nave
		)	
Serial No.:	09/392,925	)	Art Unit: 1754
		)	
Filed:	September 9, 1999	)	
		)	
For:	<b>METHOD AND APPARATUS</b>	)	
	<b>FOR ROCKET MOTOR DISPOSAL</b>	)	

Docket No. JHP-10-5377

**AMENDMENT AFTER FINAL REJECTION**

ASSISTANT COMMISSIONER FOR PATENTS  
Washington, D. C. 2031

Sir:

Responsive to the Examiner's letter of March 6, 2001, it is respectfully requested that the above-entitled application be amended as follows:

**IN THE CLAIMS:**

Please replace claims 1-9 and 21-23 (claims 10-20 having been withdrawn from consideration) with the enclosed revised clean version.

**REMARKS**

The Examiner has rejected claims 21-23 under 35 U.S.C. 112, second paragraph. The objections to the term "contaminated water" have been addressed by replacing this term with "sprayed liquid". This clearly finds antecedent in claims 1, 2 and 3 and, thus, it is believed that this amendment overcomes this rejection.

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In paragraph 7 of the Office action, the Examiner indicates that the application names joint inventors. However, it is believed that only Mr. John H. Parkes is named as an inventor. Clarification of this assertion on the part of the Examiner is requested.

The Examiner has rejected claims 1-9 and 21-23 under 35 U.S.C. 103(a) as being unpatentable over Russian Patent 2021560 C1, hereinafter the '560 patent, in view of British Patent 2306884 A, hereinafter the '884 patent. The Examiner characterizes the '560 patent as follows:

"RU 2021560 C1 discloses the disposal of solid rocket fuel by combustion in the rocket body comprising placing the charge with the opening for combustion products upwards and filling with coolant to a level which separates the main part of the combustion surface. During the combustion, coolant is supplied to the combustion chamber to regulate the combustion process. Water of neutralizing solutions of soda and alkali are used as coolant. RU 2021560 C1 also discloses that this method increases safety (see English Abstract).

RU 2021560C1 does not disclose that the coolant (e.g., enclosure of liquid) is annularly sprayed to completely surround the location in which the burning occurs. However it would have been obvious to one of ordinary skill in the art at the time the invention was made to annularly spray the coolant to completely surround the location in which the burning occurs in the process of RU 2021560 C1 because GB 2306884 A teaches annularly spraying a liquid to generate a liquid dispersion to at least surround the explosive body (e.g., the propellant of the rocket motor) to reduce the effect or suppress an explosion (see Abstract)."



This characterization in the first paragraph is generally correct. The Examiner does recognize, however, that the '560 patent does not disclose a coolant being annularly sprayed to completely surround the location at which the rocket is burned. The Examiner then takes the position, however, that the '884 patent teaches annularly spraying a liquid to generate a liquid dispersion to at least surround the explosive body (e.g. the propellant of the rocket motor) to reduce the effect or suppress an explosion. While it is true that the '884 patent does teach annularly spraying a liquid, but this is in conjunction with an explosive device which is contained within a pit. A rocket motor is not an explosive device. Indeed, an explosion within a rocket occurs only as a result of a malfunction. The rocket is the vehicle by which a payload is conveyed from one point to another. In fact, this payload may well be an explosive. On page 4 of the instant application, the first paragraph thereof clearly indicates that the munitions and an ancillary propulsion device be removed from the rocket motor before it is burned. This, of course, is to prevent explosion and its unintended consequences. If this invention were directed to an explosive device, its munitions would not be renewed. Thus, the Examiner's characterization of the rocket motor as an explosive device is not believed to be correct. Indeed, the rocket motor is not exploded in the present process. Moreover, there is no indication, teaching, suggestion or motivation cited by the Examiner for one to use a liquid spray as taught in the '884 patent for controlling an explosive device being exploded in an entirely different scenario, in a method where the propellant in the rocket motor is being burned off. Indeed, there is nothing in either of these references which would suggest or motivate completely changing the method of the '560 patent wherein a liquid is filled into a chamber in which the rocket motor is contained and the liquid is continuously added. This is a totally and completely different technique and

method for controlling the burning of a rocket motor from that used in the '884 patent for containing and controlling the explosion of explosive devices.

It is not enough that one may modify a reference in view of a second reference, but rather it is required that the second reference suggest modification of the first reference and not merely provide the capability of modifying the first reference.

The CAFC stated In re Piasecki, 745 F.2d 1468, 223 USPQ 785, 788 (Fed. Cir. 1984) the following:

"The Supreme Court in Graham v. John Deere Co., 383 U.S. 1 (1966), focused on the procedural and evidentiary processes in reaching a conclusion under Section 103. As adapted to ex parte procedure, Graham is interpreted as continuing to place the "burden of proof on the Patent Office which requires it to produce the factual basis for its rejection of an application under sections 102 and 103". Citing In re Warner, 379 F.2d 1011, 1020, 154 USPQ 173, 177 (CCPA 1967)."

The law is quite clear that in order for a claimed invention to be rejected on obviousness, the prior art must suggest the modifications sought to be patented; In re Gordon 221 U.S.P.Q. 1125, 1127 (CAFC 1984); ACS Hospital System, Inc. v. Montefiore Hospital, 221 U.S.P.Q. 929, 933 (CAFC 1984). The foregoing principle of law has been followed in Aqua-Aerobic Systems, Inc. v. Richards of Rockford, Inc. 1 U.S.P.Q. 2d, 1945 (D.C. Illinois 1986). In the Aqua-Aerobic's case, the Court stated that the fact that a prior reference can be modified to show the claimed invention does not make the modification obvious unless the prior reference suggests the desirability of the modification. The CAFC in the case of In re Gorman, 18 U.S.P.Q. 2d (CAFC 1991) held at page 1888:

"When it is necessary to select elements of various teachings in order to form the claimed invention, we ascertain whether there is any suggestion or motivation in the prior art to make the selection made by the applicant [citation]. Obviousness cannot be established by combining the teachings of the prior art to produce the claimed

invention, absent some teaching, suggestion, or incentive supporting the combination [citations]. . .

The references themselves must provide some teaching whereby the applicant's combination would have been obvious."

Further, the CAFC, in In Re Oetiker, 24 U.S.P.Q. 2nd 1443, 1445 (CAFC 1992)

held:

There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge can not come from the applicant's invention itself.

Most significantly, the CAFC in the recent case of In Re Dembiczak, 50 U.S.P.Q.2<sup>nd</sup> 1614 (CAFC 1999) held at 1617:

...(examiner can satisfy burden of obviousness in light of combination 'only by showing some objective teaching [leading to the combination]');

Thus, it is clear that where an individual reference does not teach the entire invention, then the modification which the invention represents must be suggested and motivated by some other reference through some objective teaching and cannot come from the application itself, which is not the case here.

Therefore, it is apparent that there is absolutely no teaching, suggestion or motivation for completely changing the technique disclosed in the '560 patent of immersing the rocket for burning it off, to the technique shown in the '884 patent of spraying a liquid to control explosion. Therefore, it is believed that this rejection must fail.

The Examiner also states that neither the '560 nor the '884 patents disclose removing the venturi mechanism prior to burning as claimed in claims 3 and 4. The Examiner then states that it would have been obvious to do this but states no reason other than for safety reasons. However, there is nothing anywhere that indicates this is a safety measure and,

indeed, it is stated in the application, in the first paragraph on page 4 that "If removal of the venturi mechanism is difficult or dangerous, then the apparatus of the invention can be designed to deal with rocket motors still having a venturi mechanism." Thus, there is nothing that makes it obvious to remove the venturi mechanism and, for this additional reason, claims 3 and 4 are believed to be allowable.

The Examiner recognizes that there is nothing in the '560 nor the '884 patents which indicates that the motor should be clamped in a substantially vertical position with the exhaust end facing up. The Examiner states no reason for this being obvious, other than for the gas to be released upwardly. However, there is no indication anywhere in any of the references that this is beneficial or desirable and, thus, for this additional reason, claims 5 and 6, which claim this feature, are believed to be allowable.

The Examiner also recognizes that neither the '560 nor the 884' patents disclose filtering a liquid in an enclosure and recycling the liquid, and the Examiner states no reason why this would be obvious in the context of reusing a liquid which has been used to shroud a burning rocket motor. There is nothing to indicate that filtered liquid would be safe to be used and, thus, for this additional reason, claims 8 and 9 are believed to be allowable.

The Examiner recognizes that neither the '560 nor the '884 patents disclose deflecting the contaminated water (now amended to the "sprayed liquid" to within a shroud or hood. There is nothing in any reference to indicate that this is desirable. The fact that shrouds or hoods have been used generally does not in any way indicate that, in this particular process, this could be a process parameter. Thus, for this additional reason, claims 21-23 are believed to be allowable.

The Examiner has also rejected claims 1-9 and 21-23 under 35 U.S.C. 103(a) as being unpatentable over Patent '884 in view of Patent '560. Again, this rejection is not thought to be well taken. It is not believed necessary to discuss each of the claims and each of the references again. It is believed that it suffices to say that the '884 patent does not teach any technique for burning fuel in a rocket motor but, rather, a technique for controlling the controlled explosion of an explosive device and, thus, as a basic reference, this reference must fail. The combination therewith with a technique of burning a rocket motor underwater certainly does not suggest a modification of the technique for controlling the explosion to a technique for burning of a rocket motor. As explained above, a rocket motor is not an explosive device, it is not intended to be an explosive device - only during a malfunction does it explode, and it is not exploded during this instant process. The burning of the rocket motor is not done by exploding it in the present invention, but is done in a controlled way by burning the rocket motor the way it was intended to be burned. Thus, there is no motivation for substituting a rocket motor for an explosive device.

The Examiner in paragraph 9 states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a rocket motor having a propellant in the process of the '884 patent because a propellant is an explosive body. However, the rocket propellant is not an explosive body, it is not intended to be an explosive body but, rather, a delivery vehicle for a payload which may itself be an explosive device, but the rocket motor is not, and it is not exploded in the instant process. Thus, applicant respectfully disagrees with this characterization.

The Examiner has further rejected claims 1, 3, 5-8 and 21-23 under 35 U.S.C. 103(a) as being unpatentable over Russian Patent RU 2045675 C1, hereinafter the '675 patent, in

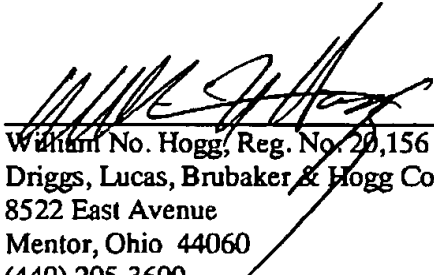
view of the '884 patent. Again, the '675 patent does not disclose a coolant annularly sprayed to completely surround the location in which the burning of rocket fuel occurs but, rather, as with the '560 patent, the propellant is submersed under water. Thus, all of the arguments with respect to the '560 patent relate to the '675 patent.

A clean version of claims 1-9 and 21-23 pending in the subject application is being provided, as well as a marked up version showing the changes made by this and the prior amendment. Specifically, the Examiner will note that the term "contaminated water" in claims 21-23 has been replaced by "sprayed liquid".

In view of the above, it is believed that each of the claims now in the application is distinguishable one from the other and over the prior art. Therefore, reconsideration and allowance of the claims is respectfully requested.

Respectfully submitted,

Date: 5-2-01

  
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Enclosures

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**VERSION OF CLAIMS WITH MARKINGS TO SHOW CHANGES MADE**

1. (once amended) A method for disposing of a rocket motor having a propellant contained therein and having an exhaust, [and] comprising the steps of:  
burning said propellant and concomitantly annularly spraying [generating] an enclosure of liquid completely surrounding the location in [within] which the burning occurs.
2. A method according to claim 1, wherein the liquid includes at least one neutralising chemical for neutralising at least some noxious substances resulting from the burning or for capturing hazardous materials, or both.
3. A method according to claim 1, wherein said rocket contains a venturi mechanism, and wherein said venturi mechanism is removed prior to the burning step.
4. A method according to claim 2, wherein said rocket contains a venturi mechanism, and wherein said venturi mechanism is removed prior to the burning step.
5. A method according to claim 1, wherein the motor is secured in a substantially vertical position, with its exhaust end facing generally upwards, during the burning step.

6. (once amended) A method according to claim 2, wherein the motor is clamped [secured] in a substantially vertical position, with its exhaust end facing generally upwards, during the burning step.

7. A method according to claim 3, wherein the motor is secured in a substantially vertical position, with its exhaust end facing generally upwards, during the burning step.

8. A method according to claim 1, comprising further steps of filtering liquid from said enclosure and recycling the filtered liquid.

9. A method according to claim 2, comprising further steps of filtering liquid from said enclosure and recycling the filtered liquid.

21. (once amended) The method according to claim 1 further characterized by deflecting the sprayed liquid [contaminated water] to within a shroud or hood .

22. (once amended) The method according to claim 2 further characterized by deflecting the sprayed liquid [contaminated water] to within a shroud or hood.

23. (once amended) The method according to claim 3 further characterized by deflecting the sprayed liquid [contaminated water] to within a shroud or hood.